86

DESIGN SPECIFICATIONS

DESIGN STRESSES

 $f_y = 60,000 \text{ psi (reinforcement)}$ 

fy = 50,000 psi (Soldier Piles)

FIELD UNITS

 $f_0' = 3.500 \text{ psi}$ 

CURVE DATA

 $\Delta = 1^{\circ} 09' 27'' (RT)$ 

P.C. Sta. = 439+74.13

P.T. Sta. 445+74.10

Curve CPI 1003 P.I. Sta. = 442+74.13

D = 0° 11′ 35"

R = 29.698.99'

T = 300.00'

1 = 599.97'

E = 1.52'

1996 AASHTO with 1997 thru 2002 Interims

1

. A. U. 5952

⊕<sub>Q-BR</sub>

FED. ROAD DIST. NO. 7

GRUNDY

SHEET SHEET NO. S1

66 OF S4 SHEETS

### GENERAL NOTES

Protective Coat shall be applied to surfaces of the concrete facing.

The contractor is responsible for the design and performance of the lagging using no less than a 3" nominal rough-sawn thickness and timber with a minimum allowable bending stress of 1000 psi.

All exposed concrete edges shall be chamfered 34" except as noted.

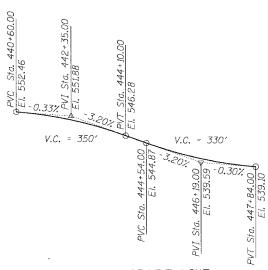
See sheet S2 for Section A-A and Wall Details. Contractor shall coordinate the retaining wall construction with storm sewer installation as required to ensure stability of the retaining wall.

Denotes Soil Boring location

## CONSTRUCTION SEQUENCE

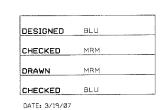
- 1. Position pile and drive to tip elevation shown in plans.
- 2. Excavate in front of wall in stages removing only the soil necessary to place each timber lagging snug against excavated surface.
- 3. After the lagging has been placed to the depths shown in the plans, the Geocomposite Wall Drain shall be attached to and cover the untreated timber lagging.
- 4. The Pine Underdrain shall be constructed by excavating a trench, lining it with fabric, placing a pipe and aggregate such that the Geocomposite Wall Drain is connected as shown on the plans.
- 5. Attach shear studs, set reinforcement, form and pour C.I.P. concrete facing.

Connect Pipe Underdrain to M.H. 6 at Inv. El. 538.85. Pipe Underdrain to have 1% minimum slope.



# PROFILE GRADE LINE 9' RT. & LT. OF & U.S. ROUTE 6

Future P.G.L. See Roadway Plans for limits of work this contract.



20'-0"

Range 7 East.

LOCATION SKETCH

Proposed

Wall #1

3rd P.M.

#### -Wrap soil around end of wall @ 1:3 (V:H) - T/Wall 28 Spa. @ 9'-3" = 259'-0" Sta. 442+85 Sta. 443+85 Bicycle Railing Posts. See Sheet 3. T/Slope El. 550,96 El. 550.60 -1:3 (V:H) El. Varies Sta. 444+65-CEI. 548,60 $^{\circ}$ (A) n Sta. 445+15-(D)El. 546.53 (E) Finished Grade at Sta. 445+45-Inside Face of Wall El. 544.03 Pipe Underdrain for Structures 4" Bottom of C.I.P. -FL 539.30 Tip El. 534.11 Concrete Facing @ Sta. 445+25 └\_Tip El. 531.57 - Tip El. 530.05 -Tip El. 529.40 5'-0" HP 12x53 5'-0" 26 Soldier Piles @ 10'-0" cts. = 250'-0"

STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION

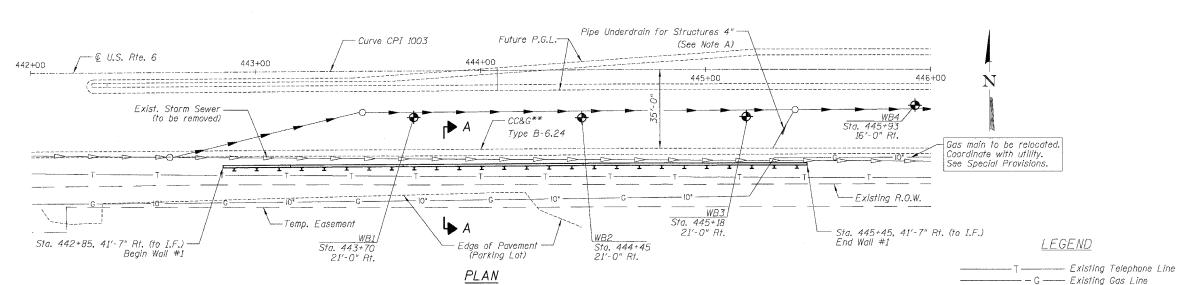
260'-0" Notes: -CJ and EJ denote Construction Joint and Expansion Joint, respectively.

8 Joints Spa. @ 30'-0" = 240'-0"

- (A), (B), etc. are labels used for reinforcement detailing. (see "Reinf. Details" and "Table of Panel Dim.," sht. S2)

## ELEVATION

(Looking at Inside Face of Wall)



UNIT TOTAL tructure Excavation u. Yd. einforcement Bars. Epoxy Coated Pound tud Shear Connectors Each 226 oncrete Structures Cu. Yd. 49.0 ntreated Timber Lagging Sq. Ft. 787 eocomposite Wall Drain Sg. Yd. 124 urnishing Soldier Piles (HP Sections) Foot 40.3 riving <del>and Sotting</del> Soldier Piles Foot 403 119 Sq. Yd. Pipe Underdrains for Structures 4 Foot

BILL OF MATERIAL

\*\* Plan view shows final future condition, see Roadway Plans and Cross Sections for limits of improvements for this contract.

------ Proposed Underdrain GENERAL PLAN & ELEVATION RETAINING WALL #1 U.S. ROUTE 6 STA 442+85 TO STA. 445+45

Existing Storm Sewer

Proposed Storm Sewer

FAU 5952-SEC. Q-BR GRUNDY COUNTY

BOWMAN, BARRETT & ASSOCIATES INC. CONSULTING ENGINEERS 130 E. RANDOLPH STREET CHICAGO, ILLINOIS 60601

